

File Copy/NP/c

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14 Oct 65  
RFDPost Office Box 6788  
Fort Davis Station  
Washington, D. C. 20020REGISTEREDLB/SS file copy  
is dated 11 May 65  
RFDFeasibility Study Report--  
High Resolution Step-and Repeat  
Contact Printer

Gentlemen:

The following paragraph by paragraph evaluation of the subject report is forwarded for review and analysis pending negotiation of Phase III of this contract:

<u>Paragraph No.</u>	<u>Action Required</u>
1.1	Change from "2 $\frac{1}{4}$ inches" to read "5 inches".
2.1	Approved as revised.
2.1.1	Approved as revised.
2.1.3	Delete and substitute the following: "Frame Selection: The printer shall be designed so the operator, by the proper setting of appropriate controls, may cause the negative film to be transported any required distance, up to 500 feet and to stop automatically in the proximity of the desired frame. It shall also be possible to cause the negative film to be transported automatically to any desired frame on the negative. Methods of implementing these features should include, but not

Declass Review by NGA.

PAGE

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GROUP 1  
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downgrading and  
declassification

**CONFIDENTIAL**Paragraph No.Action Required

be limited to, (1) frame separation sensing, both with and without a "not to exceed" distance for use in case of "batted" or overlapped frames, (2) a 4 digit footage counter, with a provision for starting from zero or any other number as a datum on the footage counter, (3) a frame counter, where the operator presets, by switches or similar means, the number of frames to be indexed starting with zero or any other number as a datum on the frame counter, or (4) a normal slow control which transports the film only while the operator actuates the control. The printer shall also permit visual verification of the entire frame by the operator."

2.3.2

Change the last sentence to read:  
"The printer will operate properly in a room environment of approximately 70° to 80° F and a relative humidity of 55% to 70%."

2.4.2

Delete and substitute the following:  
"Film Lengths: Film rolls up to 500 feet of negative film and print film, respectively. It shall be a design objective to handle film rolls up to 1,000 feet."

2.4.4

Delete and substitute the following:  
"Representative Film Types: 8430, 5427, 8402 and 80130."

2.4.5

Approved as revised.

2.4.6

Approved as revised.

2.4.7

Add the following: "Perforated film will not be used. Duplication film will be blue sensitive only. No panchromatic films will be used."

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Paragraph No.

Action Required

2.5

Change paragraph to read: "The printer shall produce prints (in dynamic mode) in nominal format sizes from a minimum of  $2\frac{1}{2} \times 5$  inches to a maximum of  $9\frac{1}{2} \times 30$  inches, as well as selected intermediate format sizes. Masks along the width of the film may be used to eliminate edge data when so desired. The mask edge image need not be sharp, and the adjustment of the mask will be manual."

2.6

Change paragraph to read: "The print rate shall be no less than 10 frames per minute, and the specified requirements for maximum quality shall be maintained. For purposes of demonstrating printing rate, a minimum output density of 0.05 above base fog shall be produced on 5427 duplicating film (processing in accordance with manufacturer's recommendation), using a uniform input density of 2.5. Resolution may be demonstrated on a high resolution film, such as 30-105 or 30-267."

2.7

Approved as revised.

2.8

Change paragraph to read: "Resolution: the printer, in its dynamic mode, shall be capable of consistently producing exposures of not less than 400 lpm from original targets of 1000:1 contrast ratio and resolving a minimum 800 lpm. This resolution requirement shall apply over the entire format of each specified size. In the event that original targets of 800 lpm of 1000:1 contrast ratio are not available, it will be sufficient if 400 lpm can be demonstrated with any input target of over 400 lpm. Microdensitometer traces will be made; however, measurement of the resolution will be accomplished visually."

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<u>Paragraph No.</u>	<u>Action Required</u>
2.11	<u>Change</u> paragraph to read: " <u>Newton Rings</u> : Provisions shall be made to prevent Newton rings from affecting the photographic quality of the output."
2.14	Approved as revised.
2.15	<u>Change</u> paragraph to read: " <u>Film Cleaning</u> : The negative and duplicating films will be furnished pre-cleaned and will require no further cleaning."
2.19.1.3	<u>Delete</u> the entire paragraph.
2.22.1	Approved as revised.
2.22.3	Approved as revised.
2.23.6	<u>Delete</u> and substitute the following: "All reasonable efforts will be made to reduce radio frequency interference to a minimum. Reduction of RFI will not be carried out to the extent that costs of components, design or fabrication are greatly increased as a result. Also, the RFI reduction must not result in hampering the operation of the device or result in a reduction in the requirements for resolution and speed of operation."
2.25	<u>Re-write</u> the revision to be more specific: "Machine Size: The printer shall be less than 6' high x 8' long x 3.5' deep in size."
2.26	<u>Re-write</u> the revision to read: " <u>Briefing Boards</u> : Briefing boards or artists concepts of the printer will be furnished in accordance with the specifications supplied by the Technical Representative of the Contracting Officer."

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Paragraph No.

Action Required

2.27

Add the following new paragraph: "Full Frame Viewing: Full frame viewing of the frame to be printed will be provided."

Specifications referred to in Paragraph 2.26 are attached herewith.

Very truly yours,

[Redacted Signature]

Contracting Officer

25

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## BRIEFING BOARDS

### Board Sizes

Horizontal format: 22" high by 30" wide (use whenever possible)  
Vertical format: 30" high by 22" wide  
Double format: 30" high by 44" wide

### Board Materials

Bainbridge, Studio Bristol, medium surface, 3 ply  
Crescent Illustration, #300, coldpress surface, medium weight  
Sho-card board or equivalent

### Type Style and Sizes

Style - Futura Semi-Bold  
Title - 60 pt  
Subtitle - 48 pt  
Annotations - 42-18 pt (as necessary)

## VIEWGRAPHS

### Viewgraph Frame

Size - 10 1/4" high by 14 3/4" wide (major axis always horizontal)

### Image Area

Size - 7 5/8" high by 9 3/8" wide

### Type Style and Sizes

Style - Alternate Gothic No. 1 (Condensed)  
Title - 30 pt  
Subtitle - 24 pt  
Annotations or other copy - 18-14 pt

## TELEPROMPTER SLIDES

### Glass Mount

Size - 3 1/4" high by 4" wide (major axis always horizontal)

### Image Area

Size - 2 5/8" high by 3 1/2" wide

### Type Style and Sizes

Style - Alternate Gothic No. 1 (Condensed)  
\*Title - 30 pt  
\*Subtitle - 24 pt  
\*Annotations or other copy - 18-14 pt

\* Based upon preparation of art work at proportionate image area size of 7 7/16" high by 9 7/8" wide.